

McGregor, J., Mercer, S. W. and Harris, F. M. (2018) Health benefits of primary care social work for adults with complex health and social needs: a systematic review. *Health and Social Care in the Community*, 26(1), pp. 1-13. (doi:[10.1111/hsc.12337](https://doi.org/10.1111/hsc.12337))

There may be differences between this version and the published version. You are advised to consult the publisher's version if you wish to cite from it.

This is the peer-reviewed version of the following article: McGregor, J., Mercer, S. W. and Harris, F. M. (2018) Health benefits of primary care social work for adults with complex health and social needs: a systematic review. *Health and Social Care in the Community*, 26(1), pp. 1-13, which has been published in final form at [10.1111/hsc.12337](https://doi.org/10.1111/hsc.12337). This article may be used for non-commercial purposes in accordance with [Wiley Terms and Conditions for Self-Archiving](#).

<http://eprints.gla.ac.uk/111079/>

Deposited on: 08 March 2016

# **Health Benefits of Primary Care Social Work for Adults with Complex Health and Social Needs: A Systematic Review**

Jules McGregor

MA (Hons), MSW, MRes

Social Worker, City of Edinburgh Council

Stewart W Mercer

Professor of Primary Care Research, University of Glasgow

Fiona M. Harris, MA (Hons), PhD.

Senior Lecturer, NMAHP Research Unit, University of Stirling

## **Corresponding Author**

Jules McGregor, 3/6 Wellington Street, Edinburgh EH7 5EE, Scotland

Email: jules.leith@googlemail.com

## **Source of Funding**

This article was originally written as part of an MRes in Health Research funded by an award from the School of Health Sciences, University of Stirling

## **Conflict of Interests**

No conflicts of interest are declared

## **Biographies**

Jules McGregor (MSW, MRes) is a Social Worker with City of Edinburgh Council Health and Social Care Department, and has completed a Masters in Health Research at University of Stirling

Stewart Mercer (MBChB, PhD, FRCGP) is an Academic General Practitioner in the Institute of Health and Wellbeing at Glasgow University

Fiona Harris (MA, PhD) is a social anthropologist based in the Nursing, Midwifery & Allied Health Professions Research Unit, School of Health Sciences, University of Stirling.

## **Abstract**

The prevalence of complex health and social needs in primary care patients is growing. Furthermore, recent research suggests that the impact of psychosocial distress on the significantly poorer health outcomes in this population may have been underestimated. The potential of social work in primary care settings has been extensively discussed in both health and social work literature and there is evidence that social work interventions in other settings are particularly effective in addressing psychosocial needs. However the evidence base for specific improved health outcomes related to primary care social work is minimal. This review aimed to identify and synthesise the available evidence on the health benefits of social work interventions in primary care settings. **Nine electronic databases were searched from 1990-2015** and seven primary research studies retrieved. Due to the heterogeneity of studies, a narrative synthesis was conducted. Although there is no definitive evidence for effectiveness, results suggest a promising role for primary care social work interventions in improving health outcomes. These include subjective health measures and self-management of long term conditions, reducing psychosocial morbidity and barriers to treatment and health maintenance. Although few rigorous study designs were found, the contextual detail and clinical settings of studies provide evidence of the practice applicability of social work intervention. Emerging policy on the integration of health and social care may provide an opportunity to develop this model of care.

## **Keywords**

**Health related social work; primary health care; chronic health problems; comorbidity; psychosocial interventions**

## **What is known**

- Multimorbidity is common, even in the working age population
- In deprived areas, psychological distress has been identified as the most significant co-morbidity
- Effective treatment and self-management are undermined by patients' complex social need and low quality of life

### **What this paper adds**

- Patients with complex health and social needs may derive measurable improvements in subjective health, functioning and self-management and reduced psychosocial morbidity
- Interventions with a dual individual/social focus may enable patients to make better health decisions
- Social work interventions may help to reduce the burden of chronic psychosocial need on clinicians and contribute to identifying at-risk groups

### **Background**

## **Multiple morbidity**

Chronic disease and mental ill health represent the biggest burden on health systems in the UK (DH 2013) and account for 80% of all GP consultations (DH 2004, Scottish Government 2009). The combination of these conditions can lead to significantly poorer health outcomes and reduced quality of life (Naylor et al 2012). Recent primary care research reveals a growing burden of multiple physical and psychological morbidity in the working age population (Barnett et al 2012). In deprived areas, psychological distress is identified as the most significant co-morbidity (McLean et al 2014). GPs report that effective treatment and self-management of illness and disease are undermined by patients' complex social need and low quality of life (O'Brien et al 2011, 2014). A recent systematic review on the management of multimorbidity in primary care concludes that there is little evidence for effective interventions to improve health outcomes, especially in deprived areas (Smith et al 2012).

These findings reflect evidence from across the UK and in US health systems, of a patient population characterised by deprivation and psychosocial complexity, generating 'constant demand' in primary care (Firth et al 1997). Patients presenting with issues such as somatisation, depression and chronic stress are generally not seen in secondary mental health care (Firth et al 2003), and research suggests they will continue to seek help from trusted primary care providers (Rock and Cooper 2000). However, primary care clinicians lack the time to provide preventive interventions and optimise chronic care (Allen et al 2004), and may be reluctant to deal with psychological morbidities, which they refer to as 'opening a can of worms' (Netting and Williams 2000). A recent US study describing the involvement of 'care managers' in primary care practices with patients with multiple social, physical and mental health conditions concluded that this approach allowed the facilitation and co-ordination of access to health and social services, and may reduce high utilisation (Williams et al 2014)

## **Social work in primary care**

The inclusion and potential of social workers in primary care teams to address a range of psychosocial and environmental barriers to health has been extensively discussed. Clinical social workers, as allied health professionals, are well established in the US health care system, often providing specialist mental health interventions as part of multidisciplinary teams (Sommers et al 2000, Wetta-Hall et al 2004). Interdisciplinary primary care may improve quality of care, quality of life and functional autonomy in multimorbid patients (Boult et al 2009). Discussion continues around the potential of generalist social work interventions to address issues such as early risk identification (Ross et al 2004), polypharmacy (Rinfrette 2009), somatisation (Berkman 1996) and disease management (Claiborne & Vandenburg 2006), particularly among vulnerable populations. It has been suggested that primary care social work can improve medical outcomes by addressing psychosocial and environmental aspects of chronic conditions such as cancer (Francouer 2001), hypertension, infectious diseases and depression (Cook et al 1996).

Comprehensive assessment of risk and complexity and co-ordination of effective responses by social workers has been described as a 'critical clinical role' (Amdur et al 2010). However, whilst a considerable literature addresses the potential benefits, and suggests that primary care staff value social work interventions particularly in older or deprived populations where they may impact positively on clinical burden (Mizrahi and Rizzo 2008), a lack of rigorous evidence has inhibited policy development (Keefe et al 2009).

In the UK, despite early evidence suggesting general practice based social work may be an effective mechanism for joint working (Williams and Clare 1979, Corney and Clare 1983), little evidence of specific improved health outcomes has been identified, and development of social work roles in this setting has been ad hoc (Le Mesurier & Cumella 2001). The literature on attachment schemes includes few effectiveness studies. Commentators have suggested a combination of organisational and policy barriers have undermined practitioners' efforts to collaborate across organisational boundaries in health care settings, not least due to social services' increasingly restrictive eligibility criteria (Lymbery 1998) and a mismatch between managers' and practitioners' perspectives of 'what social work is' (Brand et al 2005)

Non-mandatory social work intervention can be difficult to define as it takes a number of forms and may involve multiple components, however the globally accepted definition by the International Federation of Social Workers and the International Association of Schools of Social Work, is that whether involving direct therapeutic casework or case management, social work is characterised by a holistic focus on the whole of the person's life situation, social and structural context, and has *relationship* and wellbeing as the bases of intervention. Intervention happens where people interact with their environment and is, crucially, informed by principles of human rights and social justice (IFSW and IASSW joint statement 2014)

Mullen and Shuluk (2011), discussing outcomes of social work intervention in the context of evidence-based social work practice, conclude that whilst there is a considerable body of empirical evidence suggesting that social work interventions are effective across a wide range of social problems and populations, and generally benefit recipients, research informing evidence-based practice has focused on less complex, individual-orientated psychotherapeutic interventions. The lack of controlled studies and systematic reviews means conclusions about comparative effectiveness of more complex or socially-orientated interventions are difficult to draw, and the evidence base for primary care social work is particularly sparse. A need for research on the health outcomes of social work interventions has been identified (Bywaters 2011).

Social work has been described as highly contextualised (Moren and Blom 2003, Cree et al 2014), therefore evaluation must be conducted, and outcomes understood, in context in order to understand impact and predict transferability of interventions between populations. Research is needed to address the differential effectiveness of interventions (Mullen and Shuluk 2011) in order to add to knowledge about what works, for whom, and in what circumstances.

## **Aims**

This review seeks to address the broad question, “what is known about the health benefits of social work interventions in primary care settings for adults with complex health and social needs?”

## **Methods**

This review, conducted between July and September 2013, is informed by the 'subtle realist' approach to complex interventions outlined by Mays et al (2005), which suggests that multiple explanations or descriptions of phenomena relate to an underlying reality, and that synthesis promotes greater understanding of this reality.

### **Inclusion/exclusion criteria**

The inclusion and exclusion criteria for this review are shown in Table 1.

For the purposes of this review, a social work intervention may be defined as non-statutory casework or case management addressing the identified health problem alongside and within the psychosocial and environmental context

### **Outcomes**

No limit was placed on health outcomes for this review, as it sought to discover a range of evidence for health benefits.

### **Search strategy**

As the subject area was broad and relatively unexplored, a broad search strategy was developed and applied to the following 9 databases: ASSIA, IBSS, Cinahl, Medline, Embase, Sociological Abstracts, Social Services Abstracts, PsycInfo, and the Cochrane Database of Systematic Reviews. Searches used both free text and MeSH or thesaurus terms relevant to individual databases. The search strategy followed the general structure 'social work' AND 'primary care'.

**(For detailed search strategy see Supporting Materials).**



Internet searches of the Campbell Collaboration and Social Care Online were also carried out. Additional studies were identified from reference lists. The search was updated in April 2015; no further studies were found.

### **Selection of studies and critical appraisal**

The inclusion/exclusion criteria were applied by two authors (MJM & FH) and any differences negotiated. Critical appraisal was carried out drawing on CASP tools for randomised controlled trials and qualitative studies; for study designs where no checklist was available, CRD (2008) quality assessment guidance was followed. Quality assessment was carried out by a single researcher and a sample checked for consistency by a second researcher. No studies were excluded on the basis of methodological quality. The review process relating to studies identified, screened and excluded is illustrated in Figure 1:

### **Data extraction and synthesis**

Data were extracted into a standardised form by a single researcher and a sample checked by a second researcher. Study and intervention characteristics and key findings are summarised in Summary Tables 2 and 3. (and see Supporting Material tables)

Because of the heterogeneity of included studies, a meta-analysis was not possible. Instead results were combined using techniques of narrative synthesis (Popay et al 2006).

## Findings

### **Overview of Evidence**

A total of 7 papers met the inclusion criteria, describing 6 interventions. Tables 2 and 3 present a summary of included studies and interventions.

The studies were conducted in the US (4), Israel (2) and the UK (1). Surprisingly, no other European studies were found and there were no relevant systematic reviews. Four studies measured outcomes before and after intervention, and two of these included follow up. One randomised controlled study is included, which analysed variables for differential effects. All the interventions investigated are multifaceted, comprising a range of psychotherapeutic and social support approaches widely found in routine practice. The majority investigate interventions by social workers; two examine a multidisciplinary intervention (Matalon et al, 2002, 2009) and three interventions target psychosocial morbidity and subjective health, health behaviour and medical compliance (Matalon et al 2002, 2009, Rock & Cooper 2000). Health costs (Matalon et al 2002) and material conditions (Firth et al 2004) are also explored. One investigates effect on risk behaviour (Safren et al 2013) and one on self-management capacity (Enguidanos et al 2006). One qualitative study investigated implementation and impact of an intervention to assist patients to navigate health and welfare systems (Ferrante et al 2010). The interventions target a wide range of problems, including depression and anxiety, multiple chronic conditions, somatisation, material need, health risk behaviour, health resource utilisation, and self-management. Five studies describe interventions explicitly targeting complexity and chronicity of need.





## Synthesis

All the studies describe multifaceted interventions. Four studies specified a theoretical orientation (Firth et al 2004; Matalon et al 2002, 2009; Rock & Cooper 2000) and one described the choice of setting – a practice in a disadvantaged neighbourhood (Rock & Cooper 2000) – as congruent with ‘the core social work mission’

### ***Person change-focus: psychotherapeutic, cognitive and behavioural approaches***

Psychological and psychotherapeutic approaches were used in five of the six interventions, and were the main approaches used in four. In the studies by Matalon et al (2002; 2009), frequent-attender patients identified by their GPs as ‘difficult’ were referred to a multidisciplinary community intervention, the Comprehensive Consultation Clinic. Patients had an average of ten chronic symptoms and 87% had a diagnosis of somatisation. A GP/social worker team assessed medical and psychosocial history, then used intensive biographical interviewing, family genograms and listening skills to understand patient perspectives of dis-ease and co-construct a new narrative of illness, empowering traumatised patients with entrenched health perceptions to make mutually-agreed treatment decisions. The intervention continued with the patient’s choice of psychotherapeutic and social support options.

Two studies investigated effect on health costs (Matalon et al 2002), wellbeing, health perception and health indicators (Matalon et al 2009). The former demonstrated strong evidence for the utility of the intervention in reducing both GP consultations and health costs – annual average costs per patient fell from \$4035 to \$1161 – whilst the latter, using validated health and functional status measures at baseline and 1-2 year follow-up, showed statistically significant improvements in self-assessed physical fitness and activity levels, emotional and social functioning, pain and general health. Authors concluded that the intervention achieved long term improvement in subjective health measures, and a promising approach for chronic somatisation.

A randomised controlled study (Safren et al 2013) tested the effectiveness of a standardised behavioural intervention by a medical social worker to reduce HIV transmission risk behaviour (TRB). The intervention sought to educate and train HIV-infected male patients in risk prevention techniques. High risk patients received four sessions of TRB counselling comprising motivational interviewing and skills training. The intervention included modules on HIV education, stress, risk management, culture, drugs and relationships. In addition, proactive social work case management was provided for social needs. No effect was found for the intervention group overall, however subgroup analysis showed a significant decline in TRB and odds of TRB for those with depression. Authors suggest that the effectiveness of the intervention for those with depression suggests a need for more intensive interventions for those with psychiatric comorbidities (Safren et al 2013).

Social workers in the study by Enguidanos et al (2006), part of an ongoing effectiveness study, used a cognitive-behavioural problem-solving approach with older patients struggling to manage multiple chronic conditions. Social workers taught patients to identify problems, plan and carry out solutions. The main problems identified by patients were health maintenance and treatment management issues, consistent with those identified by primary care staff, followed by social problems with finance and housing. Self-identified problems were twice as likely to be solved. Problem type was not significant – increasing self-efficacy appeared to be the mechanism for solution. Authors concluded this patient-centred intervention may equip multimorbid patients with self-management skills.

In the small study by Rock & Cooper (2000) evaluating effectiveness of social work intervention to improve outcomes for depression and anxiety, social workers based in a deprived practice used counselling skills, cognitive and behavioural therapies to identify and address underlying psychosocial causes including trauma, substance misuse and bereavement. Outcomes were measured using Hudson depression and anxiety scales. Clinically significant reduction in depression scores are reported, and clinic staff reported overall improved medical compliance in patients receiving the intervention. The study by Firth et al (2004) also employed a range of psychotherapeutic methods as part of a multicomponent intervention.

Social workers based in UK general practices used methods including CBT, cognitive analytic therapy, counselling and family therapy, alongside social and environmental interventions, to address complex chronic psychosocial problems. Absence of follow-up in the latter three studies means no conclusions can be drawn about longer term preventive utility.

### ***Social or system change-focus: case management and casework approaches***

All of the interventions involved, to varying degrees, facilitation by the social worker to access resources including medical treatment and community support. The qualitative study evaluated social work patient navigation for frequent-attender patients with multiple or complex health conditions identified by physicians as requiring referral co-ordination and social services (Ferrante et al 2010). This task-focused intervention comprised linkage with community resources, appointment facilitation, assisting patient-physician communication, sourcing affordable treatment such as dentistry and follow-up of specialist referrals. The social worker felt there was insufficient time to attend to patients' psychosocial needs. Patients reported accessing services they would not otherwise, finding the service helpful and feeling supported by their primary care provider. Physicians overall viewed the intervention as providing an additional practice resource.

The UK study (Firth et al 2004) describes a comprehensive social casework model involving, in addition to psychotherapies, risk and crisis management and a range of material, social and environmental interventions. Liaison between agencies and professionals was a large part of the indirect work which also included advocacy, resource access and bureaucratic facilitation. Psychosocial morbidity outcomes were measured at discharge using a validated instrument (HoNOS; Wing et al 1998), and worker ratings of improvement. Overall reduction in psychosocial morbidity was reported as highly significant. Workers rated two thirds of patients improved; the high number of those rated as 'no change' (33%) may be partially explained by premature disengagement (Firth et al 2004). However the majority of contacts were office-

based, despite recognition of patients' struggle to engage and high DNA rate – it is unclear whether an outreach approach may have increased successful outcomes. Other than the qualitative evaluation, all of the studies described interventions specifically intended to improve clinical outcomes relevant in the primary care context: reduction of risk and psychosocial morbidity; improved functioning, physical activity, subjective health and self-management; all demonstrated a level of effectiveness, at least during intervention. No disconfirming evidence was located. Observed effect on psychosocial morbidity and functioning appear consistent across studies which measured these outcomes.

Most of the studies discussed the issue of the burden of patients with complex or intense psychosocial need on doctors. There is mixed evidence of intervention impact on clinician burden, although four studies focused intervention on 'frequent attenders' (Enguidanos et al 2006, Ferrante et al 2010, Matalon et al 2002, 2009) and two interventions appeared to reduce non-medical or somatisation-related consultations (Rock & Cooper 2000; Matalon et al 2002). One study explicitly addressed the issue of strain on the doctor-patient relationship of apparently intractable psychosomatic problems and the effect this had on doctors' attitudes to their patients. Investigators found GP satisfaction rose from 4 to 8 on a 1-10 scale following intervention (Matalon et al 2002). Interestingly, one study cites 'shared burden' with GPs as a valid reason for intervention (Firth et al 2004).

It is also relevant to highlight unintended outcomes which have implications for clinical care. The identification of at-risk groups was an unintended outcome in three studies and informed a fourth. The study by Rock & Cooper (2000) based intervention on a practice profile of presenting problems undertaken by the social workers. Comprehensive assessment identified an unexpected level of psychosocial chronicity in the GP practice population, suggesting this data could contribute to a psychosocial practice profile (Firth et al 2004), and increased GPs' understanding of the underlying cause – early trauma – of the health behaviour of their 'difficult' patients (Matalon et al 2002; 2009)



## **Population and Context factors**

### ***Patient characteristics***

All the studies concerned patients with chronic multiple morbidity. In five studies, patients had a diagnosis of longstanding depression, or depression and anxiety, and three studies described histories of trauma. Two referred to high levels of psychosocial stress, and one to enduring complex life problems. Six studies describe complex health *and* social problems, creating a picture of enmeshed need. This was often presented to GPs in the form of both frequent consultations and failure to attend appointments, or (as in the Israeli studies and attributed to a social stigma around psychiatric diagnosis) repeated requests for specialist referrals or presentation at the emergency department. Patients might be viewed by GPs as 'hard to help' (Firth et al 2004) or 'difficult' (Matalon et al 2002, 2009). Stigma and marginalisation were associated in one study with high levels of substance misuse (Safren et al 2013). Four studies feature multiethnic populations, although participants are mainly white, and it is unclear whether this reflects population distribution. One of the interventions was for adults over 65 (Enguidanos et al 2006), and in two others the majority of patients were both older and female. None of the studies found age, gender or ethnicity to moderate the effect of interventions.

Complexity, involving multiple chronic health problems and social need, and creating additional burden to primary care providers, appears to characterise patients across the studies. The presence of depression appeared to indicate a need for proactive psychosocial intervention; where this happened, in addition to improved functioning, patients appeared able to make better health decisions, evidenced by reduction in sexual health risk, acceptance of psychiatric treatment and efforts to improve health maintenance.

### ***Context and process factors***

None of the studies described attachment schemes. In five, social workers were either co-located or part of the multidisciplinary team. The qualitative study found that both physician and social worker felt co-location facilitated collaboration on behalf of patients (Ferrante et al 2010). One study highlighted the value of practice-based social workers in understanding needs and resources in the locality (Firth et al 2004). Three studies describe medical/social models which improved access to appropriate treatment (Matalon 2002, 2009; Ferrante et al 2010). Rock & Cooper (2000) found that many patients would not have accessed intervention outside primary care and may therefore not have had their psychosocial needs met, while a GP/social worker team combined their skills to enable patients to accept emotional dimensions of their illness and access treatment appropriate to their needs (Matalon et al 2002; 2009). Two studies describe interventions, PST and Patient Navigation, which may be delivered by social workers or nurses. The choice of social worker may be in recognition of greater prevalence of social need in the practice population; however knowledge of health and health systems is required; Ferrante et al (2010) concluded that combined nursing and social work training might be optimal for Patient Navigation. Connecting people to treatment, whether estrangement from the health system was due to low capacity, chronic crisis, transience, affordability or psychiatric morbidity, was a common theme across four studies.

Four studies reported no socioeconomic data. One study describes sourcing affordable basics, food or healthcare for those living in poverty as part of the intervention (Ferrante et al 2010). Two studies were set in deprived or very deprived areas (Rock & Cooper 2000; Firth et al 2004); the latter highlighted the social workers' focus on welfare – social redress as well as personal change – as an important feature of the intervention. Three studies emphasise the importance of relationship, or therapeutic alliance, to the success of intervention (Matalon et al

2002, 2009; Firth 2004), the latter stating this is an essential foundation even for indirect work. Five studies describe intervention as patient-led. The two which do not and whose focus was primarily risk or task-centred report mixed benefit (Safren et al 2013; Ferrante et al 2010)

## **Discussion**

This review aimed to synthesise evidence on the health benefits of primary care social work. Despite limited research in this area, findings indicate that patients with complex health and social needs may derive measurable health benefits from social work intervention in primary care settings, and that these benefits are congruent with primary health care: improved subjective health, functioning and self-management; reduced psychosocial morbidity and barriers to treatment and health maintenance.

The papers reviewed suggest that interventions with a dual focus on individual and social factors may measurably improve psychosocial wellbeing and enable patients to make better health decisions. Researchers investigating early pilots of primary care social work concluded that social workers in UK general practice were “diagnosticians of social difficulties, links and co-ordinators with social services, and therapists” (Goldberg et al 1968). The evidence from studies appears to suggest that primary care-based interventions still encompass these elements. There is a clear trend towards generalism; none of the studies describe ‘specialist’ roles other than the UK study (Firth et al 2004), and the authors point out that whilst the social workers had mental health training and used this in their interventions, they were performing a generalist role

The interventions investigated here appear to have a clear therapeutic focus. Therapeutic relationships in which patients felt their concerns were heard and accepted, and their health and illness understood in the context of their lives, were described by all the studies to a greater or lesser extent. Relationship is a theme which has been explored extensively in health and social work literature, and reflects the growing focus on patient-centred interventions in health; that this review appears to confirm its importance to health outcomes is unsurprising. However, enablement –

provision of the means or opportunity for improved health through practical assistance, education or empowerment, as demonstrated in five studies - may be equally important.

The interventions involved multiple components, and the case management components were only described in detail in two studies (Ferrante et al 2010, Firth et al 2004). Outcome measurements may not have captured the full range of benefits, and other outcomes of significance such as quality of life and physiological improvements were not measured. There is some risk of bias, for example those more able to engage may have improved more, particularly where patients had to attend office appointments, and this may also account for attrition; conversely, as Auslander (2008) suggests, these measures may give false negatives as sick or depressed people may continue to feel bad even when the social work intervention achieves its objectives. The minimal evidence of patients' views in included studies makes further conclusions about the impact of practical help and situational improvement on mental, or indeed physical, health difficult to draw.

Matching intensity of intervention to breadth and depth of needs was a theme across the studies, with wide variation in the number of contacts needed to achieve outcomes, and a recognition that some patients may need longer or more intensive support. People with complex needs may need different interventions at different system levels; individualised, multilevel interventions may be a more effective approach than simply 'signposting' and relying on individual commitment and capacity. The evidence also highlights the importance of comprehensive biopsychosocial assessment in planning intervention and mapping population needs. There may be potential population health benefits in the development of practice-based epidemiology and more effective anticipatory care for vulnerable groups.

The studies included in this review were conducted in clinical settings, and investigated practice as well as intervention, therefore provide both outcome and process evidence suggesting the applicability of social work interventions in primary care practice settings. **Clearly differences in both social work and health care systems will be a factor in delivery, and this may be a useful focus of another study. However, the inclusion of social workers *within* primary care teams may**

**facilitate access to effective interventions which improve health.** This is promising given the neglect of health outcomes in social work practice and research (Bywaters 2011). Meanwhile, evidence-based practice in social work, where it focuses on health at all, has been limited to psychological, person-change-focused interventions which are easier to measure and quantify (Mullen and Shuluk 2011). Recent interest in health inequalities research in social work may begin to widen the evidence base for more complex interventions.

Health equity was not a theme directly addressed in the included studies. However interventions addressed factors known to have public health benefits.

The direct, one-to-one approaches used in five studies suggested patients with complex needs were enabled to make positive changes in health behaviour and gain self-management capacity, and one specifically focused on health education and promotion (Safren et al 2013).

**A recent Israeli study examining the role of clinic-based social workers in mitigating inequalities in healthcare, supports the finding that direct advocacy and ‘bureaucratic facilitation’ on behalf of disadvantaged patients may improve health outcomes and the effectiveness of medical systems (Baum et al 2015).** Attention to social and material difficulties, including practical assistance, in recognition of the bi-directional impact of chronic illness and social problems, is perhaps most relevant to primary care in deprived areas where the burden of social and welfare problems is greatest.

The universal availability, accessibility and acceptability of primary care means people will continue to turn to their local GP when in distress. The availability of practice-based social work within a medical/social model of care may allow an earlier, or even preventive, response to psychosocial need, enabling a ‘strategy for patient management at the point of help seeking’ (Rock & Cooper 2000). Current health policy review of the potential of preventative, assessment-based interventions, and the role of social work in improving outcomes for people with long term conditions (Johnston et al 2008), may be an opportunity to develop this model in the Scottish context.

The evidence synthesised in this review is too limited and heterogeneous to draw conclusions about effectiveness. More primary research is needed, particularly in the UK context and within social work research, on the health outcomes of social work interventions, and the mechanisms by which these interventions may influence outcomes. Controlled studies could compare psychosocial, physiological and health behaviour outcomes with standard care. Longitudinal studies could examine sustainability, preventive utility and cost effectiveness. Qualitative studies eliciting patients' experiences, and practice-based evidence from both routine assessment and the use of meaningful outcome measures, may increase knowledge of the processes and nuances of intervention which contribute to better health.

The impact of psychosocial difficulties on health outcomes for people with multimorbidity may have been underestimated (NHS Improvement and RCGP 2013), but is an issue of increasing importance in primary care as the focus of policy shifts towards continuous integrated care in the community . 80% of chronic illness and 90% of mental health problems are managed in primary care (NICE 2011), and prevalence of both is growing, making the need for evidence on interventions which can improve psychosocial health, and thereby health outcomes, imperative.

#### **4.1 Limitations**

This review is limited by the scant evidence available in an under-researched area of practice, lack of rigorous study designs and lack of follow-up in most of the studies. Grey literature was not included, therefore there may be publication bias as relevant unpublished literature may have been omitted; this is particularly likely in the case of research by social work practitioners, which may only be presented at conferences and in 'trade' publications. Only studies published in English were included.

#### **4.2 Conclusion**

This review provides some evidence supporting the utility of primary care social work interventions in producing health benefits for patients with complex physical and mental health and social needs. This evidence may be relevant to NHS outcomes and improvement frameworks for long term conditions, self-management, mental health and multimorbidity, as well as public health guidance on interventions to

improve health equity. Limited evidence suggests a beneficial impact on clinical care and continuity of care, in reducing the burden of chronic psychosocial need on clinicians and contributing to identifying at-risk groups in practice populations. Given existing empirical evidence for the general effectiveness of social work interventions, indications that positive health-specific outcomes for vulnerable groups are possible is promising, not least because of the potential impact on health inequalities.

## References

Allen K, Hazelett S, Jarjoura D, Wright K, clough J and Weinhardt J (2004), 'Improving Stroke Outcomes: Implementation of a Postdischarge Care Management Model', *Journal of Clinical Outcomes Management* volume 11, Issue 11, pages 707-714

Amdur D, Batres A, Belisle J, Brown JH, Cornis-Pop M, Mathewson-Chapman M, Harms G, Hunt SC and Kennedy P (2011), 'VA Integrated Post-Combat Care: A Systemic approach to Caring for Returning Combat Veterans', *Social Work in Health Care* Volume 50, Issue 7, pages 564-575  
<http://dx.doi.org/10.1080/00981389.2011.554275>

Auslander GK (2008), 'Outcomes of Social Work Intervention in Health Care Settings', *Social Work in Health Care* Volume 31, Issue 2, pages 31-46

Badger LW, Ackerson B, Buttell F, and Rand EH (1997), 'The case for integration of social work psychosocial services into rural primary care practice', *Health & Social Work* Volume 22, Issue 1, pages 20-29  
<http://dx.doi.org/10.1093/hsw/22.1.20>

Barnett K, Mercer SW, Norbury M, Watt G, Wyke S and Guthrie B (2012), 'Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study', *Lancet*, volume 380, issue 9836, pages 37-43  
[http://dx.doi.org/10.1016/S0140-6736\(12\)60240-2](http://dx.doi.org/10.1016/S0140-6736(12)60240-2)

Bauer D, Batson R, Hayden W and Counts MM (2005), 'Integrating behavioral health services within a primary care center in a rural setting', *Families in Society: The Journal of Contemporary Social Services* Volume 86, Issue 1, pages 63-70.  
<http://dx.doi.org/10.1606/1044-3894.1878>



**Baum N, Shalit H, Kum Y and Tal M (2015), ' Social workers' role in tempering inequality in healthcare in hospitals and clinics: a study in Israel', Health and Social Care in the Community Early View, Article first published online 26 March 2015, doi: 10.1111/hsc.12234**

Bethune C and Finn E (1990), 'Family Practice and Social Work: Who Really Cares?', Canadian Family Physician Volume 356, pages 333-336

Blue-Howells J, McGuire J and Nakashima J (2008), 'Co-Location of Health Care Services for Homeless Veterans: A Case Study of Innovation in Program Implementation', Social Work in Health Care Volume 47, Issue 3, pages 219-231  
<http://dx.doi.org/10.1080/00981380801985341>

Boult C, Green AF, Boult LB, Pacala JT, Snyder C and Leff B (2009), 'Successful Models of Comprehensive Care for Older Adults with Chronic conditions: Evidence for the Institute of Medicine's "Retooling for an Aging America" Report', Journal of the American Geriatrics Society Volume 57, pages 2328-2337  
<http://dx.doi.org/10.1111/j.1532-5415.2009.02571.x>

Brand D, Reith T & Statham D (2005) The Need for Social Work Intervention: A Discussion Paper for the Scottish 21st Century Social Work Review, Scottish Executive <http://www.scotland.gov.uk/Publications/2005/12/16105307/53095>, (accessed 17.11.12)

Brouwers EPM, de Bruijne M, Terluin B, Tiemens BG and Verhaak PFM (2006), 'Cost-effectiveness of an activating intervention by social workers for patients with minor mental disorders on sick leave: a randomized controlled trial', European Journal of Public Health Volume 17, Issue 2, pages 214-220

Brouwers EPM, Tiemens BG, Terluin B and Verhaak PFM (2006), 'Effectiveness of an intervention to reduce sickness absence in patients with emotional distress or minor mental disorders: a randomized controlled effectiveness trial', General Hospital Psychiatry Volume 26, pages 223-229  
<http://dx.doi.org/10.1016/j.genhosppsych.2006.02.005>

Bywaters P (2011), 'Health Inequalities and the Challenge for Social Work', Presentation, School of Sociology, Social Policy and Social Work, Queens University Belfast 2011

Centre for Reviews and Dissemination (CRD) (2008) Systematic Reviews: CRD's guidance for undertaking reviews in health care, York, CRD, University of York

Claiborne N and Vandenburg H (2000), 'How Can Social Workers Improve Outcomes and Costs in Disease Management?', Disease Management and Health Outcomes Volume 11, Issue 7, pages 407-413

Claiborne N and Vandenburg H (2001), 'Social Workers' Role in Disease Management', Health and Social Work Volume 26, Issue 4, pages 217-225  
<http://dx.doi.org/10.1093/hsw/26.4.217>

Cook CAL, Freedman JA, Freedman LD, Arick RK and Miller ME (1996), 'Screening for Social and Environmental Problems in a VA Primary Care Setting', Health and Social Work Volume 21. Issue 1, pages 41-47

Corney RH and Clare AW (1983), 'The Effectiveness of Attached Social Workers in the Management of Depressed Women in General Practice', British Journal of Social Work, Volume 13, pages 57-74

Crighton EJ, Creighton E and Drummond N (2005), 'The evaluation of a social work program in a hospital-based family practice unit in Ontario, Canada', International Social Work Volume 48, Issue 6, pages 725-731  
<http://dx.doi.org/10.1177/0020872805056990>

Del Toro I, Larsen DA and Carter AP (1994), 'A New Approach to Alcoholism Detection in Primary Care', Journal of Mental Health Administration Volume 21, Issue 2, pages 124-135  
<http://dx.doi.org/10.1007/BF02521320>

Department of Health (2004), Chronic Disease Management: a compendium of information, London, Department of Health,  
<http://www.natpact.info/uploads/Chronic%20Care%20Compendium.pdf> (accessed 20.08.13)

Department of Health (2011), NHS Outcomes Framework 2012/13, London, Department of Health,  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/213711/dh\\_131723.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213711/dh_131723.pdf) (accessed 21.08.13)

Department of Health (2013), Global Burden of Disease study shows mixed picture for UK health, London, Department of Health, <http://healthandcare.dh.gov.uk/burden-of-disease/> (accessed 20.08.13)

Enguidanos S, Coulourides KA, Keefe B, Geron SM and Katz L (2011), 'Patient-centered approach to building problem solving skills among older primary care patients: problems identified and resolved', Journal of Gerontological Social Work Volume 53, Issue 3, pages 276-291  
<http://dx.doi.org/10.1080/01634372.2011.552939>

Ferrante JM, Cohen DJ and Crosson JC (2010), 'Translating the Patient Navigator Approach to meet the Needs of Primary Care', Journal of the American Board of Family Medicine volume 23, Issue 6, pages 736-744  
<http://dx.doi.org/10.3122/jabfm.2010.06.100085>

Firth MT and Ronalds CM (1997), 'Psychiatric social work in primary care: a pilot scheme in one inner-city practice', Journal of Interprofessional Care Volume 11, Issue 3, pages 295-302  
<http://dx.doi.org/10.3109/13561829709034126>

Firth MT Dyer M and Wilkes J (1999), 'Reducing the distance: mental health social work in general practice', Journal of Interprofessional Care Volume 13, Issue 4, pages 335-344  
<http://dx.doi.org/10.3109/13561829909010379>

Firth MT, Dyer M, Marsden H and Savage D (2003), 'Developing a social perspective in mental health services in primary care', Journal of Interprofessional Care Volume 17, Issue 3, pages 251-261

<http://dx.doi.org/10.1080/1356182031000122870>

Firth MT, Dyer M, Marsden H, Savage D and Mohamad H (2004), 'Non-Statutory Mental Health Social Work in Primary Care: A Chance for Renewal?', British Journal of Social Work Volume 34, pages 145-163

<http://dx.doi.org/10.1093/bjsw/bch038>

Freij M, Weiss L, Gass J, Trezza C, Wiener A, Melly J and Volland P (2011), ' "Just Like I'm Saving Money in the Bank": Client Perspectives on Care Coordination Services', Journal of Gerontological Social Work Volume 54, Issue 7, pages 731-748

<http://dx.doi.org/10.1080/01634372.2011.594490>

Francouer RB (2001), 'Reformulating Financial Problems and Interventions to Improve Psychosocial and Functional Outcomes in Cancer Patients and Their Families', Journal of Psychosocial Oncology volume 19, Issue 1, pages 1-20

[http://dx.doi.org/10.1300/J077v19n01\\_01](http://dx.doi.org/10.1300/J077v19n01_01)

Geron SM & Keefe B (2006), 'Moving evidence-based interventions to populations: a case study using social workers in primary care', Home Health Care Services Quarterly, Volume 25, Issue 1-2, pages 95-113

[http://dx.doi.org/10.1300/J027v25n01\\_06](http://dx.doi.org/10.1300/J027v25n01_06)

Goldberg EM, Neill J, Speak BM and Faulkner HC (1968), 'Social Work in General Practice', The Lancet, Volume 292, Issue 7567, pages 552-555

[http://dx.doi.org/10.1016/S0140-6736\(68\)92421-5](http://dx.doi.org/10.1016/S0140-6736(68)92421-5)

Johnston L, Lardner C and Jepson R (2008) Overview of Evidence Relating to Shifting the Balance of Care: A Contribution to the Knowledge Base, Edinburgh, Scottish Government, [www.scotland.gov.uk/socialresearch](http://www.scotland.gov.uk/socialresearch) (accessed 2.09.13)

Keefe B, Geron SM & Enguidanos S (2009), 'Integrating social workers into primary care: Physician and nurse perceptions of roles, benefits, and challenges', *Social Work in Health Care* Volume 48, Issue 6, pages 579-596

<http://dx.doi.org/10.1080/00981380902765592>

Lawson KD, Grieve E, Mercer SW, Wyke S, Guthrie B, Watt GCM & Fenwick EAL (2012), 'Double Trouble: The impact of multimorbidity on preference-weighted quality of life & health inequalities', Presentation, Scottish School of Primary Care Conference, Glasgow 2012

Le Mesurier N & Cumella S (2001), 'The rough road and the smooth: comparing access to social care for older people via area teams and GP surgeries', *Managing Community Care* Volume 9, Issue 1, pages 7-13

<http://dx.doi.org/10.1108/14769018200100003>

Lymbery M (1998), 'Social Work in General Practice: Dilemmas and Solutions', *Journal of Interprofessional Care*, Volume 12, Issue 2, pages 199-208

<http://dx.doi.org/10.3109/13561829809014106>

Matalon A, Nahmani T, Rabin S, Maoz B and Hart J (2002), 'A short-term intervention in a multidisciplinary referral clinic for primary care frequent attenders: description of the model, patient characteristics and their use of medical resources', *Family Practice* Volume 19, Issue 3, pages 251-256

<http://dx.doi.org/10.1093/fampra/19.3.251>

Matalon A, Yaphe J, Nahmani T, Portuguese-Chitrit N and Maoz B (2009), 'The Effect of a Multi-Disciplinary Integrative Intervention on Health Status and General Health Perception in Primary Care Frequent Attenders', *Families, Systems and Health* Volume 27, Issue 2, pages 77-84

<http://dx.doi.org/10.1037/a0014769>

Mays N, Pope C and Popay J (2005), 'Systematically reviewing qualitative and quantitative evidence to inform management and policy-making in the health field', *Journal of Health Service Research and Policy* Volume 10, Supplement 1, pages S1:6-S1:20

McGuire J, Bikson K and Blue-Howells J (2005), 'How Many Social Workers Are Needed in Primary Care? A Patient-Based Needs Assessment Example', *Health and Social Work* Volume 30, Issue 4, pages 305-313

<http://dx.doi.org/10.1093/hsw/30.4.305>

McLean G, Gunn J, Wyke S, Guthrie B, Watt GCM, Blane D, Mercer SW (2014), 'The Influence of socioeconomic deprivation on multimorbidity at different ages', *British Journal of General Practice* Volume 64 (624), page e440-447

<http://dx.doi.org/10.3399/bjgp14X680545>

Mercer SW & Wyke S (2012), 'Managing patients with mental and physical multimorbidity', *British Medical Journal* Volume 345, Issue 7874, 10.1136/bmj.e5559

Mizrahi T & Rizzo VM (2008), 'Perspectives on the roles and value of social work practice in neighborhood health centers and implications for the reimbursement of services', *Social Work in Public Health*, Volume 23, Issue 6, pages 99-125

<http://dx.doi.org/10.1080/19371910802059668>

Moren S and Blom B (2003), 'Explaining Human Change: On Generative Mechanisms in Social work Practice', *Journal of Critical Realism*, Volume 2, Issue 1, pages 37-61

<http://dx.doi.org/10.1558/jocr.v2i1.37>

Mullen EJ and Shuluk J (2011), 'Outcomes of social work intervention in the context of evidence-based practice', *Journal of Social Work*, Volume 11, Issue 1, pages 49-63

<http://dx.doi.org/10.1177/1468017310381309>

National Institute of Health and Care Excellence (NICE) (2009), Methods for the development of NICE public health guidance (second edition), London, NICE  
<http://www.nice.org.uk/media/2FB/53/PHMethodsManual110509.pdf>  
(accessed 31.08.13)

National Institute of Health and Care Excellence (NICE) (2009), Methods for the development of NICE public health guidance (second edition), London, NICE  
<http://www.nice.org.uk/media/2FB/53/PHMethodsManual110509.pdf>

National Institute for Health and Care Excellence (NICE) (2011), Common mental health disorders: identification and pathways to care, London, NICE  
<http://www.nice.org.uk/guidance/index.jsp?action=byID&o=13476> (accessed 25.08.13)

Naylor C, Parsonage M, McDaid D, Knapp M, Fossey M and Galea A (2012), Long term conditions and mental health : The cost of co-morbidities, London, The Kings Fund and Centre for Mental Health  
[http://www.kingsfund.org.uk/sites/files/kf/field/field\\_publication\\_file/long-term-conditions-mental-health-cost-comorbidities-naylor-feb12.pdf](http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/long-term-conditions-mental-health-cost-comorbidities-naylor-feb12.pdf) (accessed 20.08.13)

Netting FE and Williams FG (2000), 'Expanding the Boundaries of Primary Care for Elderly People', Health and Social Work Volume 25, Issue 4, pages 233-242  
<http://dx.doi.org/10.1093/hsw/25.4.233>

NHS Scotland Shifting the Balance of Care Delivery Group (2009), Improving Outcomes by Shifting the Balance of Care: Improvement Framework, NHS Scotland  
<http://www.shiftingthebalance.scot.nhs.uk/improvement-framework/> (accessed 2.09.13)

O'Brien R, Wyke S, Guthrie B, Watt G, Mercer SW (2011), 'An "endless struggle": a qualitative study of GPs' and Practice Nurses' experiences of managing multimorbidity in socio-economically deprived areas of Scotland', Chronic Illness 2011, 7; 45-59  
<http://dx.doi.org/10.1177/1742395310382461>

O'Brien R, Wyke S, Watt G, Guthrie B, Mercer SW (2014) 'The 'everyday work' of living with multimorbidity in socio-economically deprived areas of Scotland', *Journal of Comorbidity* Volume 4, Issue 1, pages 1-10 (doi:10.15256/joc.2014.4.32)

Popay J, Roberts H, Sowden A, Petticrew M, Arai L, Rodgers M, Britten N (2006) *Guidance on the Conduct of Narrative Synthesis in Systematic Reviews*, ESRC Methods Programme, Lancaster, Institute for Health Research  
[http://www.lancs.ac.uk/shm/research/nssr/research/dissemination/publications/NS\\_Synthesis\\_Guidance\\_v1.pdf](http://www.lancs.ac.uk/shm/research/nssr/research/dissemination/publications/NS_Synthesis_Guidance_v1.pdf) (accessed 1.07.13)

Rinfrette ES (2009), 'Treatment of anxiety, depression, and alcohol disorders in the elderly: Social work collaboration in primary care', *Journal of Evidence-Based Social Work* Volume 6, Issue 1, pages 79-91  
<http://dx.doi.org/10.1080/15433710802633569>

Rock BD and Cooper M (2000), 'Social work in primary care: A demonstration student unit utilizing practice research', *Social Work in Health Care* Volume 31, Issue 1, pages 1-17  
[http://dx.doi.org/10.1300/J010v31n01\\_01](http://dx.doi.org/10.1300/J010v31n01_01)

Rose SM (2006), 'Using Life Course Epidemiology to Inform Social Work Research & Practice', presentation to International Federation of Social Work World Conference, Munich 2006

Ross J, Walther V and Epstein I (2004), 'Screening Risks for Intimate Partner Violence and Primary Care Settings: Implications for Future Abuse', *Social Work in Health Care* Volume 38, Issue 4, pages 1-23  
[http://dx.doi.org/10.1300/J010v38n04\\_01](http://dx.doi.org/10.1300/J010v38n04_01)

Ross JW, Roberts D, Campbell J, Sofranko Solomon K and Brouhard BH (2004), 'Effects of Social Work Intervention on Nonemergent Pediatric Emergency Department Utilization', *Health and Social Work* Volume 29, Issue 4, pages 263-273  
<http://dx.doi.org/10.1093/hsw/29.4.263>



Ross F and Tissier J (1997), 'The care management interface with general practice: a case study', *Health and Social Care in the Community* volume 5, Issue 3, pages 153-161

<http://dx.doi.org/10.1111/j.1365-2524.1997.tb00110.x>

Safren SA, O'Cleirigh CM, Skeer M, Elsesser SA and Mayer KH (2013), 'Project Enhance: A Randomized Controlled Trial of an Individualised HIV Prevention Intervention for HIV-Infected Men Who Have Sex With Men Conducted in a Primary Care Setting', *Health Psychology* Volume 32, Issue 2, pages 171-179

<http://dx.doi.org/10.1037/a0028581>

Scottish Government (2013), 'A Route Map to the 2020 Vision for Health and Social Care', Scottish Government , <http://www.gov.scot/Resource/0042/00423188.pdf> (accessed 8.03.15)

Sharifi V, Tehranidoost M, Yunesian M, Homayoun A, Mohammadi M and Jalali Roudsari M (2012), 'Effectiveness of a Low-Intensity Home-Based Aftercare for Patients with Severe Mental Disorders: A 12-month Randomized Controlled Study', *Community Mental Health Journal* Volume 48, Issue 6, pages 766-770

<http://dx.doi.org/10.1007/s10597-012-9516-z>

Smith SM (2012), 'Managing patients with multimorbidity: systematic review of interventions in primary care and community settings', *British Medical Journal*, BMJ 2012;345:e5205, <http://www.bmj.com/content/345/bmj.e5205>

<http://dx.doi.org/10.1136/bmj.e5205> (accessed 31.08.13)

Sommers LS, Marton KI, Barbaccia JC and Randolph J (2000), 'Physician, Nurse and Social Worker Collaboration in Primary Care for Chronically Ill Seniors', *Archives of Internal Medicine* Volume 160, Issue 12, pages 1825-1833

<http://dx.doi.org/10.1001/archinte.160.12.1825>

Van Hook, MP (2003), 'Psychosocial issues within primary health care settings: Challenges and opportunities for social work practice', *Social Work in Health Care*, Volume 38, Issue 1, pages 63-80

Wetta-Hall R, Berry M, Ablah E, Gillispie JM and Stepp-Cornelius LK (2004), 'Community Case Management: A Strategy to Improve Access to Medical Care in Uninsured Populations', Care Management Journal Volume 5, Issue 2, pages 87-93  
<http://dx.doi.org/10.1891/cmaj.5.2.87.66280>

Williams P and Clare A (1979), 'Social workers in primary health care: the general practitioner's viewpoint', Journal of the Royal College of General Practitioners Volume 29, pages 554-558

Williams BC, Paik JL, Haley LL, Grammatico GM (2014), 'Centralized care management support for "high utilizers" in primary care practices at an academic medical center', Care Management Journal Vol 15, Issue 1, pages 26-33,  
<http://www.ncbi.nlm.nih.gov/pubmed/24761538> (accessed 8.03.15)

**Wing JK, Beevor AS, Curtis RH, Park SB, Hadden S and Burns A (1998),  
'Health of the Nation Outcome Scales (HoNOS). Research and development',  
The British Journal of Psychiatry Volume 172, Issue 1. pages 11-18,  
(doi: 10.1192/bjp.172.1.11)**

Table 1: Inclusion/Exclusion criteria

Inclusion Criteria	Exclusion Criteria
Adults	Children and young people < 16 years
Social work interventions based in or attached to primary care or community health services, including as part of multidisciplinary care teams	Interventions limited to those for the geriatric population such as falls, dementia or arranging hospital discharge or homecare Interventions comprising a single component for a single outcome, such as alcohol brief intervention
1990-2015	Articles published prior to 1990
Publication types: peer-reviewed primary research articles and systematic reviews published in English	Publication types: non-peer-reviewed articles, commentaries, study protocols, conference papers
Study designs: all study designs	

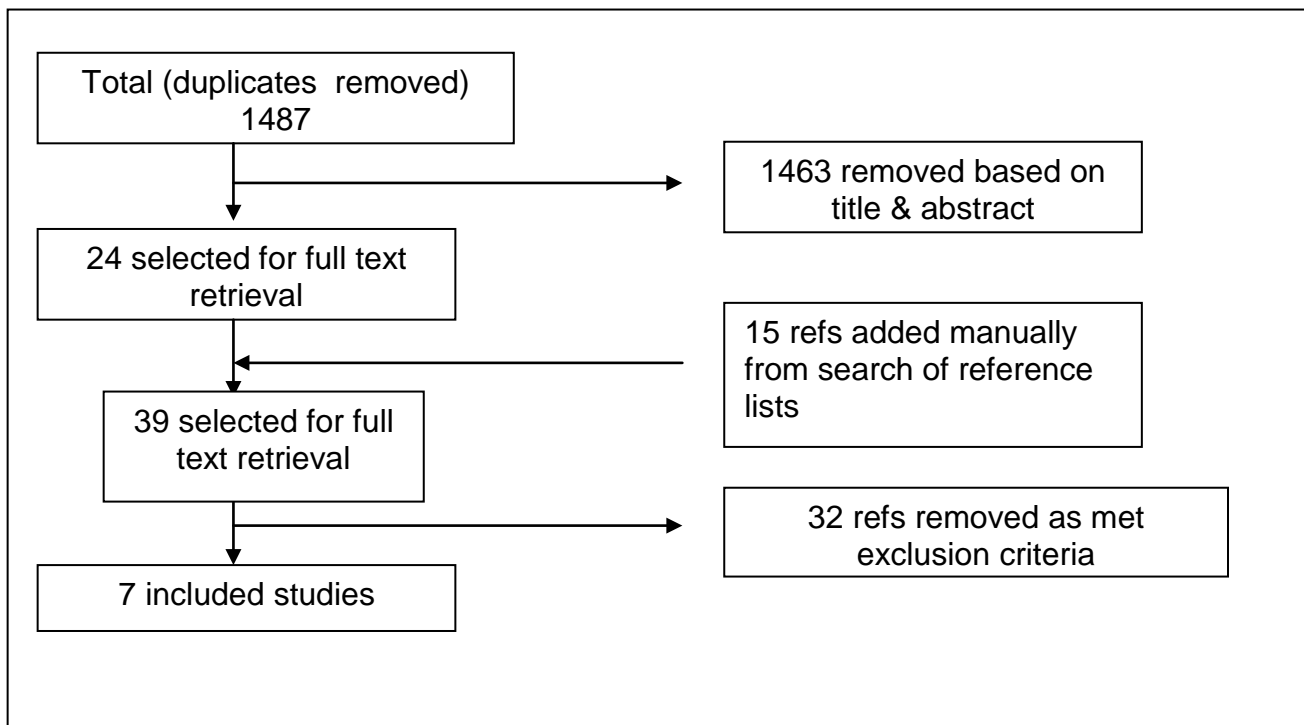


Figure 1: PRISMA diagram 9.04.15

Table 2: Summary of Study Characteristics

<b>Study</b>	<b>Design</b>	<b>Aim</b>	<b>Population</b>	<b>Intervention</b>
Enguidanos et al (2006) (US)	Descriptive analysis	Identify factors associated with successful outcomes for intervention group	Patients with high healthcare utilisation and multiple chronic conditions	Problem Solving Therapy
Ferrante et al (2010) (US)	Comparative analysis	Understand barriers & facilitators to Patient Navigator intervention	Frequent attenders with multiple & complex health & psychosocial problems	Patient Navigation (link working and advocacy)
Firth et al (2004) (UK)	Case file analysis	Assess effect & analyse content of social work interventions	Patients with enduring complex psychosocial problems	Social casework
Matalon et al (2002) (Israel)	Uncontrolled pilot study	Assess effect on health costs, resource use and GP satisfaction	“difficult” patients with multiple chronic conditions & somatisation diagnosis	Biographical interviewing & case management
Matalon et al (2009) (Israel)	Cross sectional uncontrolled study	Assess effect on wellbeing, health perception & functioning	“difficult” frequent attenders with multiple chronic conditions	Biographical interviewing & case management
Rock & Cooper (200) (US)	Natural experiment	Assess effect on improved outcomes for depression & anxiety	Patients with psychosocial problems	Counselling, advocacy & outreach
Safren et al (2013) (US)	Randomised Controlled Trial	Assess effect on risk behaviour	HIV+ men who have sex with men	Risk behaviour counselling, proactive case management

Table 3: Summary of Intervention characteristics

<b>Study &amp; Intervention</b>	<b>Aim of intervention</b>	<b>Intervention content</b>	<b>Outcomes</b>	<b>Conclusions</b>
Enguidanos et al (2006)  Problem Solving Therapy	Train patients in problem solving skills	4-8 PST sessions with social worker.	Yes or No outcome recorded in case notes. 59% resolved within intervention period	Intervention appears effective in improving self-management for older people with multiple chronic conditions
Ferrante et al (2010)  Patient Navigation	Co-ordinate services; assist patients with multiple chronic conditions to manage care & treatment	Resource advocacy & linkage; referral co-ordination; emotional support; appointment facilitation	Patient notes; Qualitative interviews. Increased resource access; lower psychological distress	Intervention appears effective in supporting illness management for patients with complex needs
Firth et al (2004)  Social Casework	Reduce psychosocial morbidity; achieve social redress	Holistic casework: Direct/ therapeutic work & Indirect/ facilitation & advocacy work	HoNOS scale. Significant reduction in mean HoNOS scores at discharge	Nuances of intervention, including relationship, are key to outcomes
Matalon et al (2002)  Biographical Interviewing & Case Management	Modify health resource use, improve patient-GP relationship & reduce health costs	Medical & psychosocial interviews Biographical integrative group discussion; case management	Reduction in mean health costs, GP visits, ED visits, inpatient days; increased GP satisfaction	Integrated biopsychosocial intervention modified illness behaviour and reduced health costs
Matalon et al (2009)  Biographical Interviewing & Case Management	Improve wellbeing, health perception and health indicators	Medical & Psychosocial interviews Biographical integrative group discussion; case management	Significant improvement in emotional & social function, physical fitness, & general health (COOP) & pain (SF36)	Long term improvement in subjective health measures  Improved wellbeing an unexpected outcome
Rock and Cooper (2000)  Counselling with advocacy and outreach	Improve patient-specific outcomes for depression and anxiety	Various psychological therapies, appointment facilitation, referrals	Significant reduction in depression scores, reduced pain, reduced DNA (Hudson)	Reduction in depression, anxiety & somatisation; fewer physician visits; better medical & dietary compliance
Safren et al (2013)  TRB counselling intervention with proactive social work case management	Reduce HIV transmission risk behaviour	4 sessions with medical social worker: TRB educational, motivational & behavioural counselling.. Individualised social work case management	Self report. No significant effect for whole intervention group. Significant reduction in TRB & odds of TRB in subgroup with depression	Differential effectiveness for depressed patients suggests more intensive intervention could have greater impact on transmission

**Evidence Summary – psychological and psychotherapeutic approaches**

One study reported reduction in frequent GP consultations and health costs

One study reported significant and long term improvement in self-assessed health

One study reported clinically significant reduction in depression, and overall improvement in medical compliance

One study reported reduced sexual risk behaviour in subgroup with depression

One study reported acquisition of self-management skills

Box 1: Psychological and psychotherapeutic approaches

**Evidence Summary – casework and case management approaches**

One study reported patients benefited by accessing services they would not otherwise, and physicians viewed the intervention as an additional practice resource

One study reported significant reduction in psychosocial morbidity

One study reported increased GP satisfaction with the doctor-patient relationship

Two studies reported increased practice awareness of unmet population need

Box 2: Casework and case management approaches



**Evidence Summary – patient characteristics**

All studies concerned patients with chronic multiple morbidity

Five studies concerned patients with longstanding depression

Five studies concerned patients with frequent attendance presentation

Six studies concerned patients with complex health *and* social needs

No evidence was reported to suggest age, gender or ethnicity moderated outcomes

Depressed patients receiving proactive intervention were able to make better risk, treatment and health maintenance decisions

Box 3: Patient characteristics

**Evidence Summary – context and process factors**

Three studies report combined medical/social interventions improved access to appropriate treatment

Four studies report patients enabled to access or navigate the health system

Five studies highlight the need to treat mental health problems in their social context

Three studies reported interventions to address poverty or deprivation

Five studies reported a patient-led intervention

Box 4: Context and process factors

### **Tables, figures and boxes – positioning in document**

Table 1: p6 between paragraph 2 'Inclusion/Exclusion criteria' and paragraph 3 'Outcomes'

Figure 1: p7 between paragraph 2 'Selection of studies and critical appraisal' and paragraph 3 'Data extraction and synthesis'

Table 2: whole of p9, following paragraph 'overview of evidence' on p8

Table 2: whole of p10

Box 1: p13 between first paragraph and second 'social or system-change focus...'

Box 2: p15 top before paragraph 1 'Population and context factors'

Box 3: p16 top before paragraph 1 'context and process factors'

Box 4: p17 prior to new section 'Discussion'

## **Supporting Materials**

Table 2: Included studies: study characteristics

Table 3: Included studies: Intervention characteristics

## **Detailed search strategy**